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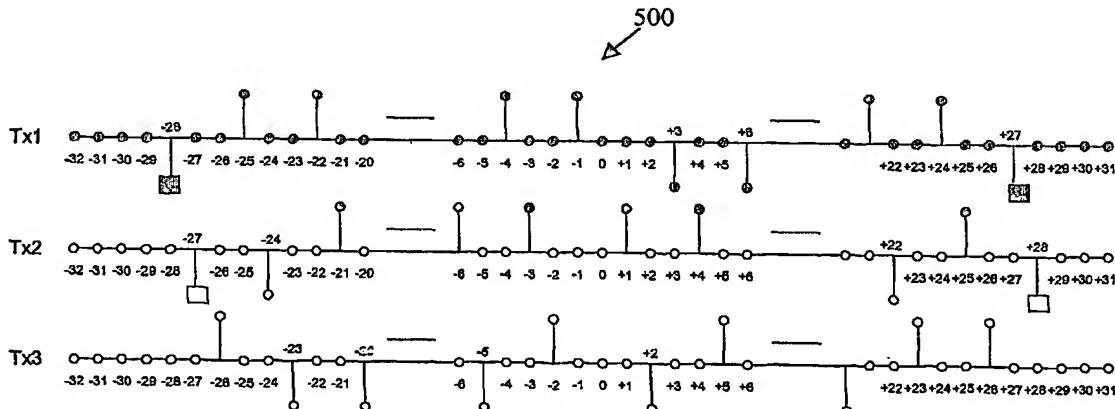
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(54) Title: METHOD AND APPARATUS FOR COMMUNICATING SYMBOLS IN A MULTIPLE INPUT MULTIPLE OUTPUT COMMUNICATION SYSTEM USING INTERLEAVED SUBCARRIERS ACROSS A PLURALITY OF ANTENNAS



WO 2005/006701 A1

(57) Abstract: A method and apparatus are provided for transmitting one or more symbols in a multiple antenna wireless communication system. Subcarriers from one or more symbols are interleaved across a plurality of antennas. The symbols may be, for example, long or short training symbols based on a single-antenna long or short training symbol, respectively, and wherein each subsequent subcarrier from the single-antenna training symbol is positioned in a training symbol for a logically adjacent antenna. One or more additional subcarriers may be inserted in at least one of the plurality of symbols to allow nulled subcarriers to be estimated using an interpolation-based channel estimation technique. The remaining portions of a header, as well as the data sequences of a packet, may also be diagonally loaded.